

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

# PCT

To:

see form PCT/ISA/220

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/JP2004/013995

International filing date (day/month/year)  
16.09.2004

Priority date (day/month/year)  
22.09.2003

International Patent Classification (IPC) or both national classification and IPC  
H01Q1/32, H01Q7/08, H01Q1/22

Applicant  
ALPHA CORPORATION

### 1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

### 3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**International application No.  
PCT/JP2004/013995

IAP20 Rec'd PCT/PTO 21 MAR 2006

**Box No. I Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material:  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing:  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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**Box No. II    Priority**

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1. ☒ The following document has not been furnished:

☒ copy of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43*bis*.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43*bis*.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

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**Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

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The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application,
- ☒ claims Nos. 2

because:

- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):
- ☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 2 are so unclear that no meaningful opinion could be formed (*specify*):

**see separate sheet**

- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☐ no international search report has been established for the whole application or for said claims Nos.
- ☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:
  - the written form ☐ has not been furnished
  - ☐ does not comply with the standard
  - the computer readable form ☐ has not been furnished
  - ☐ does not comply with the standard
- ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.
- ☐ See separate sheet for further details

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**Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	1,3,4
	No: Claims	
Inventive step (IS)	Yes: Claims	
	No: Claims	1,3,4
Industrial applicability (IA)	Yes: Claims	1,3,4
	No: Claims	

2. Citations and explanations

**see separate sheet**

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

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**Re Item V.**

1. The following documents were cited in the international search report and are identified as D1 to D6, whereby the numbering will be adhered to in the rest of the procedure:

- D1: US-A-5 396 698 (ORTHMANN KURT ET AL) 14 March 1995 (1995-03-14)
- D2: PATENT ABSTRACTS OF JAPAN vol. 1996, no. 10, 31 October 1996 (1996-10-31) & JP 8 166446 A (KUBOTA CORP), 25 June 1996 (1996-06-25)
- D3: WO 99/19585 A (HUF HUELSBECK & FUERST GMBH ; KEMMANN HARALD (DE); LANGE STEFAN (DE);) 22 April 1999 (1999-04-22)
- D4: US-A-5 253 226 (GANTER WOLFGANG) 12 October 1993 (1993-10-12)
- D5: PATENT ABSTRACTS OF JAPAN vol. 1996, no. 08, 30 August 1996 (1996-08-30) & JP 8 097616 A (TOKIN CORP), 12 April 1996 (1996-04-12)
- D6: PATENT ABSTRACTS OF JAPAN vol. 1998, no. 10, 31 August 1998 (1998-08-31) & JP 10 117107 A (TOKO INC), 6 May 1998 (1998-05-06)

The applicants' attention is especially drawn to the cited passages of each document cited in the international search report.

2. The present application does not meet the criterion set forth in Article 33 (3) PCT because the subject matter of claims 1 and 3 does not involve an inventive step as explained below.

Document D1 discloses, see especially column 2, line 55 to column 3, line 52; column 4, line 47-65, Figures 1, 2 and 7: An antenna apparatus comprising an antenna having a core around which an insulative covered conductor (12) is wound, the core comprises a magnetic core (16) and a wiring layer (10), and the magnetic core is made of flexible soft magnetic material.

The subject-matter of claim 1 therefore differs from this known antenna in that the wiring layer is laminated on the magnetic core.

Laminating the wiring layer 10 to the magnetic core 16 is an constructional feature to combine a magnetic layer with a wiring layer which comes within the scope of the customary practice followed by persons skilled in the art, especially as the advantages thus achieved can readily be foreseen. Consequently, this feature is not considered to contribute to the inventive step of an antenna as defined in claim 1.

Thus, the subject-matter of claim 1 lacks an inventive step.

Mounting an electronic component on an extended portion of the core, as claimed in claim 3, is already known from a similar antenna device, see D2, abstract and Figure 1. It therefore appears possible for the person skilled in the art to apply the features known from document D2 with corresponding effect in an antenna device according to document D1 and thus arrive at an antenna according to claim 3 without the exercise of inventive skill.

3. The application does not meet the requirements of Article 6 PCT, because claims 2 and 4 are not clear.

Dependent claim 2 claims that the wiring layer is formed on a printed board. It is not clear from the application how a wiring layer can be formed on a printed board and at the same time be laminated to a magnetic core, as claimed in claim 1.

Claim 4 claims an electricity control section which permits energization "to the wiring layer". The vague feature of "energizing" a "wiring layer" is not referred to in the description. This inconsistency between the claims and the description leads to doubt concerning the matter for which protection is sought, thereby rendering the claims unclear, Article 6 PCT.

However, an electric control section which permits and prohibits energization to electrical wires, is also disclosed in D2, see abstract and Figures 1 and 2. In case of need, the skilled person would readily apply this feature of a controller to the apparatus of D1 to control its functions. Therefore, the above-mentioned lack of clarity notwithstanding, the subject-matter of claim 4 seems not to involve an inventive step in the sense of Article 33(3) PCT, and therefore the criteria of Article 33(1) PCT are not met.

4. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1 and D2 is not mentioned in the description, nor are these documents identified therein.